

ABSTRACT

A waste treatment apparatus treats radioactive contaminated waste from a nuclear fuel material handling facility to decontaminate the radioactive contaminated waste by using an electrolytic molten salt, and reuses the electrolytic molten salt so that any effluents are not produced. Radioactive contaminated waste (10) from a nuclear fuel material handling facility is subjected to electrolysis by a molten salt electrolysis unit (20) to decontaminate the waste (10). The used salt (16) used for decontaminating the waste (10) is filtered to separate nuclear fuel materials (19) from the used salt (16). The filtered salt (18) is reused by the molten salt electrolysis unit (20). The salt adhering to the decontaminated waste (12) is recovered by an evaporating unit (59), and the recovered salt (15) is reused by the molten salt electrolysis unit (20).